

REMARKS

Claims 1-21, all the claims pending in the application, stand rejected on prior art grounds. Applicants respectfully traverse these rejections based on the following discussion.

I. The Prior Art Rejections

Claims 1, 5-9, 13-15, and 19-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Poznanski, et al. (U.S. Patent No. 6,397,174), hereinafter referred to as Poznanski, in view of Galler, et al. (U.S. Patent No. 5,991,720), hereinafter referred to as Galler. Claims 2-3, 10-11, and 16-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Poznanski, in view of Galler, in further view of Bahl, et al. (U.S. Patent No. 4,759,068), hereinafter referred to as Bahl. Claims 4, 12, and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Poznanski, in view of Galler, and in further view of Lee, et al. (U.S. Patent No. 7,165,019), hereinafter referred to as Lee. Applicants respectfully traverse these rejections based on the following discussion.

As described in paragraphs 0014-0015 of Applicant's disclosure, the claimed invention provides a method wherein the next word within a sentence can be predicted for mixed language expressions. This next word can be of the same language as the text of the previous words, or can be from another language. A database of word equivalence probabilities is used as required by a monolingual language generator. The monolingual language generator uses a mixed-language word history to generate a monolingual word history. The monolingual history is in turn used by a monolingual language model. A

resulting next-word hypothesis is used by a next-word language change model, which uses word equivalence probabilities to convert the next word in the monolingual word hypothesis to the next word in the foreign language. An expected mixed-language next word can be provided.

In the rejection, the Office Action argues that the prior art references disclose many features of the claimed invention. However, Poznanski does not use a word history in a mixed language, which includes a history of previous words in a *sentence-based word sequence*, for generating a monolingual word history. Instead, Poznanski only discloses a multilingual dictionary, which has an alphabetical index of terms and their respective definitions. In addition, Galler fails to teach or suggest next word probabilities and predicting a next word in a word sequence. Instead, Galler discloses a *speech recognition* system that generates word candidates based on “acoustic speech data” that is verbally input by a user. Therefore, as explained in greater detail below, Applicants respectfully submit that the prior art of record does not teach or suggest the claimed invention.

Applicants traverse the rejections because the prior art of record fails to teach or suggest the claimed features of “generating a monolingual word history in the first language based upon a word history in a mixed language ... wherein said mixed language word history and said monolingual word history each comprise a history of previous words in a sentence-based word sequence”. Such features are defined in independent claims 1, 8, and 9 using identical language.

Nothing within Poznanski teaches or suggests generating a word history in a first language based upon a word history in a mixed language, wherein the word histories comprise a history of previous words in a sentence-based word sequence. Instead, “Poz teaches a dictionary composed of monolingual or multilingual text” (Office Action, p. 3, para. 2 (citing Poznanski, col. 2, lines 19-26)). However, the “dictionary” in Poznanski does not disclose a “history of previous words in a sentence-based word sequence” in a mixed language or a monolingual language. Rather, the dictionary in Poznanski merely discloses an alphabetical index of terms and their respective definitions.

Accordingly, Applicants submit that Poznanski does not use a word history in a mixed language, which includes a history of previous words in a sentence-based word sequence, for generating a monolingual word history. Instead, Poznanski only discloses a multilingual dictionary, which has an alphabetical index of terms and their respective definitions. Therefore, it is Applicants’ position that the prior art of record fails to teach or suggest the claimed features of “generating a monolingual word history in the first language based upon a word history in a mixed language ... wherein said mixed language word history and said monolingual word history each comprise a history of previous words in a sentence-based word sequence” as defined in independent claims 1, 8, and 9.

In addition, Applicants traverse the rejections because the prior art of record fails to teach the claimed features of “generating monolingual next word hypothesis probabilities in the first language based upon the monolingual word history, wherein said monolingual next word hypothesis probabilities predict a next word in said word

sequence”. Such features are defined in independent claims 1, 8, and 9 using identical language.

Nothing within Galler teaches or suggests “generating ... next word hypothesis probabilities ... based upon ... word history” or “predict[ing] a next word in said word sequence”. Instead, Galler merely discloses a *speech recognition* system that generates word candidates based on “acoustic speech data” that is verbally input by a user. The word candidates are not hypothesized based on a “word history”; rather, the word candidates are generated based on spoken words of a user.

Therefore, it is Applicants position that the prior art of record fails to teach or suggest the claimed features of “generating monolingual next word hypothesis probabilities in the first language based upon the monolingual word history, wherein said monolingual next word hypothesis probabilities predict a next word in said word sequence” as defined in independent claims 1, 8, and 9.

Furthermore, Applicants traverse the rejections because the prior art of record fails to teach the claimed features “determining a probability of a next word in a mixed language expression based upon the monolingual next word hypothesis probabilities and the stored word equivalence probabilities, wherein said probability of said next word predict a next word in said mixed language expression”. Such features are defined in independent claims 1, 8, and 9 using identical language.

As more fully described above, Galler fails to teach or suggest next word probabilities and predicting a next word in a word sequence. Instead, Galler discloses a

speech recognition system that generates word candidates based on “acoustic speech data” that is verbally input by a user.

Therefore, it is Applicants’ position that the prior art of record does not teach or suggest many features defined by independent claims 1, 8, 9 and that such claims are patentable over the prior art of record. Further, it is Applicants’ position that dependent claims 2-7 and 10-21 are similarly patentable, not only because of their dependency from a patentable independent claims, but also because of the additional features of the invention they defined. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections.

II. Formal Matters and Conclusion

In view of the foregoing, Applicants submit that claims 1-21, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary. Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 09-0441.

Respectfully submitted,

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